WHAT IS CLAIMED IS:

1. A method comprising:

obtaining timing information from a spiral servo reference track on a machine-readable medium to determine head position; and

generating a servo track with servo information based on the determined head position.

2. The method of claim 1, wherein the spiral servo reference track comprises multiple non-overlapping spiral servo reference tracks.

3. The method of claim 2, wherein the multiple non-overlapping spiral servo reference tracks comprise at least twice a number of servo spokes to be generated.

4. The method of claim 1, wherein obtaining timing information comprises determining a peak position of a diamond-shaped waveform generated by reading the spiral servo reference track in a circle, a read head intersecting the spiral servo reference track at an angle.

5. The method of claim 1, wherein the spiral servo reference track comprises an encoded repeating pattern including a timing-reference symbol, and said obtaining the timing information comprises identifying occurrences of the timing-reference symbol in the spiral servo reference track.

6. The method of claim 5, wherein said identifying occurrences of the timing-reference symbol in the spiral servo reference track comprises:

decoding the encoded repeating pattern using multiple framings of signal samples of a signal from the machine-readable medium;

correlating the signal samples that indicate pattern transitions, for the multiple framings, with valid pattern transitions as defined by the encoding;

accumulating the transition pattern correlations for the multiple framings;

selecting one of the multiple framings as a correct framing for decoding based on the accumulated correlations; and

determining a waveform polarity for the signal based on the repeating pattern and the selected correct framing.

7. The method of claim 6, wherein said decoding the encoded repeating pattern using multiple framings comprises performing Viterbi detection, using a correlation metric, with the multiple framings.

8. The method of claim 6, wherein the encoded repeating pattern comprises a 1/N rate coding of a repeating pattern of multiple filler symbols followed by the timing-reference symbol, resulting in a channel bit rate of N relative to a symbol rate, and said decoding the encoded repeating pattern comprises using N different framings of the signal samples, the method further comprising sampling the signal at the channel bit rate.

9. The method of claim 6, wherein said correlating the signal samples that indicate pattern transitions comprises correlating the signal samples that indicate transitions from a filler symbol to the timing-reference symbol with expected signal samples for transitions from the filler symbol to the timing-reference symbol.

10. The method of claim 9, wherein said correlating the signal samples that indicate pattern transitions further comprises correlating the signal samples that indicate transitions from the timing-reference symbol to the filler symbol with expected signal samples for transitions from the timing-reference symbol to the filler symbol.

11. The method of claim 6, wherein said selecting one of the multiple framings as a correct framing comprises selecting one of the multiple framings after a programmable number of transition pattern correlations have been accumulated.

12. The method of claim 6, wherein said accumulating the transition pattern correlations comprises adding up positive correlations, and said selecting one of the multiple framings comprises selecting a framing having a largest associated accumulation of positive correlations.

13. The method of claim 6, wherein said determining the waveform polarity comprises:

determining a signal-indicated framing based on a generally sinusoidal portion of the signal; and

identifying a reversed polarity if the signal-indicated framing is different than the correct framing selected based on the accumulated correlations.

14. The method of claim 6, wherein said determining the waveform polarity comprises checking for an inordinate number of timing-reference symbols in the decoded pattern for the selected correct framing.

15. The method of claim 1, wherein said generating the servo track comprises writing the servo information into servo wedges in circular, concentric tracks on the machine-readable medium, overwriting at least a portion of the spiral servo reference track.

16. The method of claim 1, wherein said generating the servo track comprises writing the servo information on another machine-readable medium.

17. A system comprising:

a servo writer that writes a spiral servo reference track on a machine-readable medium; and

a storage device that includes the machine-readable medium and generates a servo track with servo information in the storage device based on head position determined using timing information obtained from the spiral servo reference track.

18. The system of claim 17, wherein the servo writer writes multiple non-overlapping spiral servo reference tracks on the machine-readable medium.

19. The system of claim 18, wherein the multiple non-overlapping spiral servo reference tracks comprise at least twice a number of servo spokes to be generated.

20. The system of claim 17, wherein the storage device determines a peak position of a diamond-shaped waveform generated by reading the spiral servo reference track in a circle.

21. The system of claim 17, wherein the storage device comprises:

a detector that decodes an encoded repeating pattern including a timing-reference symbol in the spiral servo reference track for multiple framings of the encoded repeating pattern; and

framing and polarity monitoring circuitry that indicates one of the multiple framings as a proper framing and indicates reversed polarity based on the encoded repeating pattern.

22. The system of claim 21, wherein the encoded repeating pattern comprises a 1/N rate coding of a repeating pattern of multiple filler symbols followed by the timing-reference symbol, resulting in a channel bit rate of N relative to a symbol rate, and the detector decodes the encoded repeating pattern using N different framings of signal samples.

23. The system of claim 21, wherein the framing and polarity monitoring circuitry comprises output pattern correlation accumulators that retain measures of correlation between sampled output and expected output for pattern transitions in the encoded repeating pattern for the multiple framings.

24. The system of claim 23, wherein the framing and polarity monitoring circuitry indicates one of the multiple framings as a proper framing after a programmable number of transition pattern correlations have been accumulated.

25. The system of claim 21, wherein the framing and polarity monitoring circuitry identifies reversed polarity by checking for an inordinate number of timing-reference symbols in the decoded pattern.

26. The system of claim 21, wherein the framing and polarity monitoring circuitry identifies reversed polarity by checking if a signal-indicated framing is different than a pattern-transition-correlation indicated framing.

27. The system of claim 21, wherein the detector comprises a Viterbi detector including a branch metric generator that produces branch metrics comprising a correlation of the encoded repeating pattern and corresponding estimated data generated according to the encoding.

28. The system of claim 17, wherein the storage device comprises multiple magnetic-based storage disks, one of the magnetic-based storage disks comprising the machine-readable medium.

29. A storage device comprising:

a machine-readable medium including a spiral servo reference track; and

a servo track generator that obtains timing information from the spiral servo reference track on the machine-readable medium and writes a servo track with servo information based on the obtained timing information.

30. The device of claim 29, wherein the machine-readable medium includes multiple non-overlapping spiral servo reference tracks.

31. The device of claim 30, wherein the multiple non-overlapping spiral servo reference tracks comprise at least twice a number of servo spokes to be generated.

32. The device of claim 29, wherein the servo track generator determines a peak position of a diamond-shaped waveform generated by reading the spiral servo reference track in a circle.

33. The device of claim 29, wherein the servo track generator comprises:

a detector that decodes an encoded repeating pattern including a timing-reference symbol in the spiral servo reference track for multiple framings of the encoded repeating pattern; and

framing and polarity monitoring circuitry that indicates one of the multiple framings as a proper framing and indicates reversed polarity based on the encoded repeating pattern.

34. The device of claim 33, wherein the encoded repeating pattern comprises a 1/N rate coding of a repeating pattern of multiple filler symbols followed by the timing-reference symbol, resulting in a channel bit rate of N relative to a symbol rate, and the detector decodes the encoded repeating pattern using N different framings of signal samples.

35. The device of claim 33, wherein the framing and polarity monitoring circuitry comprises output pattern correlation accumulators that retain measures of correlation between sampled output and expected output for pattern transitions in the encoded repeating pattern for the multiple framings.

36. The device of claim 35, wherein the framing and polarity monitoring circuitry indicates one of the multiple framings as a proper framing after a programmable number of transition pattern correlations have been accumulated.

37. The device of claim 33, wherein the framing and polarity monitoring circuitry identifies reversed polarity by checking for an inordinate number of timing-reference symbols in the decoded pattern.

38. The device of claim 33, wherein the framing and polarity monitoring circuitry identifies reversed polarity by checking if a signal-indicated framing is different than a pattern-transition-correlation indicated framing.

39. The device of claim 33, wherein the detector comprises a Viterbi detector including a branch metric generator that produces branch metrics comprising a correlation of the encoded repeating pattern and corresponding estimated data generated according to the encoding.

40. The device of claim 39, wherein the encoding comprises a Manchester code.

41. The device of claim 29, wherein the machine-readable medium comprises multiple magnetic-based storage disks, and the servo track generator writes multiple servo tracks on the multiple disks based on the obtained timing information.

42. A system comprising:

means for writing a spiral servo reference track on a machine-readable medium; and

means for generating a servo track with servo information based on timing information obtained from the spiral servo reference track on the machine-readable medium.

43. The system of claim 42, wherein said means for generating the servo track comprises:

means for decoding the encoded repeating pattern using multiple framings of signal samples of a signal from the machine-readable medium;

means for correlating the signal samples that indicate pattern transitions, for the multiple framings, with valid pattern transitions as defined by the encoding;

means for accumulating the transition pattern correlations for the multiple framings;

means for selecting one of the multiple framings as a correct framing for decoding based on the accumulated correlations; and

means for determining a waveform polarity for the signal based on the repeating pattern and the selected correct framing.

44. The system of claim 43, wherein said means for decoding comprises Viterbi means for detecting the encoded repeating pattern, using a correlation metric, with the multiple framings.

45. The system of claim 43, wherein the encoded repeating pattern comprises a 1/N rate coding of a repeating pattern of multiple filler symbols followed by a timing-reference symbol, resulting in a channel bit rate of N relative to a symbol rate, and said means for decoding comprises means for using N different framings of the signal samples.

46. The system of claim 43, wherein said means for correlating the signal samples that indicate pattern transitions comprises means for correlating the signal samples that indicate transitions from a filler symbol to a timing-reference symbol with expected signal samples for transitions from the filler symbol to the timing-reference symbol, and correlating the signal samples that indicate transitions from the timing-reference symbol to the filler symbol with expected signal samples for transitions from the timing-reference symbol to the filler symbol.

47. The system of claim 43, wherein said means for selecting one of the multiple framings as a correct framing comprises programmable means for selecting one of the multiple framings.

48. The system of claim 43, wherein said means for determining the waveform polarity comprises:

means for determining a signal-indicated framing based on a generally sinusoidal portion of the signal; and

means for identifying a reversed polarity if the signal-indicated framing is different than the correct framing selected based on the accumulated correlations.

49. A machine-readable medium embodying information indicative of instructions for causing one or more machines to perform operations comprising:

decoding an encoded repeating pattern using multiple framings of signal samples of a signal from a machine-readable medium;

correlating the signal samples that indicate pattern transitions, for the multiple framings, with valid pattern transitions as defined by the encoding;

accumulating the transition pattern correlations for the multiple framings;

selecting one of the multiple framings as a correct framing for decoding based on the accumulated correlations; and

determining a waveform polarity for the signal based on the repeating pattern and the selected correct framing.

50. The machine-readable medium of claim 49, wherein said decoding the encoded repeating pattern using multiple framings comprises performing Viterbi detection, using a correlation metric, with the multiple framings.

51. The machine-readable medium of claim 50, wherein said determining the waveform polarity comprises:

determining a signal-indicated framing based on a generally sinusoidal portion of the signal; and

identifying a reversed polarity if the signal-indicated framing is different than the selected correct framing.

52. The machine-readable medium of claim 49, wherein said selecting one of the multiple framings as a correct framing comprises selecting one of the multiple framings after a programmable number of transition pattern correlations have been accumulated.

53. The machine-readable medium of claim 49, wherein the encoded repeating pattern comprises a 1/N rate coding of a repeating pattern of multiple filler symbols followed by a timing-reference symbol, resulting in a channel bit rate of N relative to a symbol rate, and said decoding the encoded repeating pattern comprises using N different framings of the signal samples, the operations further comprising sampling the signal at the channel bit rate.

54. The machine-readable medium of claim 49, wherein said correlating the signal samples that indicate pattern transitions comprises correlating the signal samples that indicate transitions from a filler symbol to the timing-reference symbol with expected signal samples for transitions from the filler symbol to the timing-reference symbol.

55. The machine-readable medium of claim 49, wherein said correlating the signal samples that indicate pattern transitions comprises correlating the signal samples that indicate transitions from the timing-reference symbol to a filler symbol with expected signal samples for transitions from the timing-reference symbol to the filler symbol.

56. The machine-readable medium of claim 49, wherein said accumulating the transition pattern correlations comprises adding up positive correlations, and said selecting one of the multiple framings comprises selecting a framing having a largest associated accumulation of positive correlations.